

1. An isolated antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:

- (a) a protein consisting of amino acid residues 1 to 136 of SEQ ID NO:310;
- (b) a protein consisting of amino acid residues 25 to 136 of SEQ ID NO:310;
- (c) a protein consisting of a portion of SEQ ID NO:310, wherein said portion comprises at least 30 contiguous amino acid residues of SEQ ID NO:310; and
- (d) a protein consisting of a portion of SEQ ID NO:310, wherein said portion comprises at least 50 contiguous amino acid residues of SEQ ID NO:310.

2. The antibody or fragment thereof of claim 1 that specifically binds protein

(a).

3. The antibody or fragment thereof of claim 1 that specifically binds protein

(b).

4. The antibody or fragment thereof of claim 1 that specifically binds protein

(c).

5. The antibody or fragment thereof of claim 1 that specifically binds protein

(d).

6. The antibody or fragment thereof of claim 2 that specifically binds protein (b).
7. The antibody or fragment thereof of claim 3, wherein said protein bound by said antibody or fragment thereof is glycosylated.
8. The antibody or fragment thereof of claim 3 which is a human antibody.
9. The antibody or fragment thereof of claim 3 which is a polyclonal antibody.
10. The antibody or fragment thereof of claim 3 which is selected from the group consisting of:
  - (a) a chimeric antibody;
  - (b) a humanized antibody;
  - (c) a single chain antibody; and
  - (d) a Fab fragment.
11. The antibody or fragment thereof of claim 3 which is labeled.
12. The antibody or fragment thereof of claim 11, wherein the label is selected from the group consisting of:
  - (a) an enzyme;
  - (b) a radioisotope; and
  - (c) a fluorescent label.

13. The antibody or fragment thereof of claim 3, wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.

14. The antibody or fragment thereof of claim 3, wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.

15. An isolated cell that produces the antibody or fragment thereof of claim 3.

16. A hybridoma that produces the antibody or fragment thereof of claim 3.

17. An isolated antibody or fragment thereof obtained from an animal that has been immunized with a protein selected from the group consisting of:

(a) a protein comprising the amino acid sequence of amino acid residues 1 to 136 of SEQ ID NO:310; and

(b) a protein comprising the amino acid sequence of amino acid residues 25 to 136 of SEQ ID NO:310;

(c) a protein comprising the amino acid sequence of at least 30 contiguous amino acid residues of SEQ ID NO:310; and

(d) a protein comprising the amino acid sequence of at least 50 contiguous amino acid residues of SEQ ID NO:310;

wherein said antibody or fragment thereof specifically binds to said amino acid sequence.

18. The antibody or fragment thereof of claim 17 obtained from an animal immunized with protein (a).

19. The antibody or fragment thereof of claim 17 obtained from an animal immunized with protein (b).

20. The antibody or fragment thereof of claim 17 obtained from an animal immunized with protein (c).

21. The antibody or fragment thereof of claim 17 obtained from an animal immunized with protein (d).

22. The antibody or fragment thereof of claim 17 which is a monoclonal antibody.

23. The antibody or fragment thereof of claim 17 which is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a polyclonal antibody;
- (c) a humanized antibody;
- (d) a single chain antibody; and
- (e) a Fab fragment.

24. An isolated monoclonal antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:

- (a) a protein consisting of amino acid residues 1 to 136 of SEQ ID NO:310;
- (b) a protein consisting of amino acid residues 25 to 136 of SEQ ID NO:310;

(c) a protein consisting of a portion of SEQ ID NO:310, wherein said portion comprises at least 30 contiguous amino acid residues of SEQ ID NO:310; and

(d) a protein consisting of a portion of SEQ ID NO:310, wherein said portion comprises at least 50 contiguous amino acid residues of SEQ ID NO:310.

25. The antibody or fragment thereof of claim 24 that specifically binds protein (a).

26. The antibody or fragment thereof of claim 24 that specifically binds protein (b).

27. The antibody or fragment thereof of claim 24 that specifically binds protein (c).

28. The antibody or fragment thereof of claim 24 that specifically binds protein (d).

29. The antibody or fragment thereof of claim 26, wherein said protein bound by said antibody or fragment thereof is glycosylated.

30. The antibody or fragment thereof of claim 26 which is a human antibody.

31. The antibody or fragment thereof of claim 26 which is selected from the group consisting of:

(a) a chimeric antibody;

- (b) a humanized antibody;
- (c) a single chain antibody; and
- (d) a Fab fragment.

32. The antibody or fragment thereof of claim 26 which is labeled.

33. The antibody or fragment thereof of claim 32, wherein the label is selected from the group consisting of:

- (a) an enzyme;
- (b) a radioisotope; and
- (c) a fluorescent label.

34. The antibody or fragment thereof of claim 26, wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.

35. The antibody or fragment thereof of claim 26, wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.

36. An isolated cell that produces the antibody or fragment thereof of claim 26.

37. A hybridoma that produces the antibody or fragment thereof of claim 26.

38. An isolated antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:

(a) a protein consisting of the full-length polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975;

(b) a protein consisting of the mature form of the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975;

(c) a protein consisting of a portion of the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975, wherein said portion comprises at least 30 contiguous amino acid residues of the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975; and

(d) a protein consisting of a portion of the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975, wherein said portion comprises at least 50 contiguous amino acid residues of the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975.

39. The antibody or fragment thereof of claim 38 that specifically binds protein

(a).

40. The antibody or fragment thereof of claim 38 that specifically binds protein

(b).

41. The antibody or fragment thereof of claim 38 that specifically binds protein

(c).





- (a) an enzyme;
- (b) a radioisotope; and
- (c) a fluorescent label.

50. The antibody or fragment thereof of claim 40, wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.

51. The antibody or fragment thereof of claim 40, wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.

52. An isolated cell that produces the antibody or fragment thereof of claim 40.

53. A hybridoma that produces the antibody or fragment thereof of claim 40.

54. An isolated antibody or fragment thereof obtained from an animal that has been immunized with a protein selected from the group consisting of:

- (a) a protein comprising the amino acid sequence of the full-length polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975;

- (b) a protein comprising the amino acid sequence of the mature form of the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975;

- (c) a protein comprising the amino acid sequence of at least 30 contiguous amino acid residues of the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975; and

(d) a protein comprising the amino acid sequence of at least 50 contiguous amino acid residues the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975;

wherein said antibody or fragment thereof specifically binds to said amino acid sequence.

55. The antibody or fragment thereof of claim 54 obtained from an animal immunized with protein (a).

56. The antibody or fragment thereof of claim 54 obtained from an animal immunized with protein (b).

57. The antibody or fragment thereof of claim 54 obtained from an animal immunized with protein (c).

58. The antibody or fragment thereof of claim 54 obtained from an animal immunized with protein (d).

59. The antibody or fragment thereof of claim 54 which is a monoclonal antibody.

60. The antibody or fragment thereof of claim 54 which is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a polyclonal antibody;

- (c) a humanized antibody;
- (d) a single chain antibody; and
- (e) a Fab fragment.

61. An isolated monoclonal antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:

- (a) a protein consisting of the full-length polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975;
- (b) a protein consisting of the mature form of the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975;
- (c) a protein consisting of a portion of the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975, wherein said portion comprises at least 30 contiguous amino acid residues of the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975; and
- (d) a protein consisting of a portion of the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975, wherein said portion comprises at least 50 contiguous amino acid residues of the polypeptide encoded by the HEMAE80 cDNA contained in ATCC Deposit Number 97975.

62. The antibody or fragment thereof of claim 61 that specifically binds protein (a).

63. The antibody or fragment thereof of claim 61 that specifically binds protein (b).

64. The antibody or fragment thereof of claim 61 that specifically binds protein

(c).

65. The antibody or fragment thereof of claim 61 that specifically binds protein

(d).

66. The antibody or fragment thereof of claim 62 that specifically binds protein

(b).

67. The antibody or fragment thereof of claim 63, wherein said protein bound by said antibody or fragment thereof is glycosylated.

68. The antibody or fragment thereof of claim 63 which is a human antibody.

69. The antibody or fragment thereof of claim 63 which is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a humanized antibody;
- (c) a single chain antibody; and
- (d) a Fab fragment.

70. The antibody or fragment thereof of claim 63 which is labeled.

71. The antibody or fragment thereof of claim 70, wherein the label is selected from the group consisting of:

- (a) an enzyme;
- (b) a radioisotope; and
- (c) a fluorescent label.

72. The antibody or fragment thereof of claim 63, wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.

73. The antibody or fragment thereof of claim 63, wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.

74. An isolated cell that produces the antibody or fragment thereof of claim 63.

75. A hybridoma that produces the antibody or fragment thereof of claim 63.